

# NASA TECH BRIEF

## *Goddard Space Flight Center*



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### Automated Preventive Maintenance Program

#### **The problem:**

To devise an inexpensive preventive maintenance computer program which is written in a non-business-oriented language and can be adapted to other tasks.

#### **The solution:**

A preventive maintenance program which is concise and inexpensive to operate, and can be adapted to almost any system that has a FORTRAN IV compiler.

#### **How it's done:**

The program operates on a stored data base. Output consists of scheduling information and various management reports.

A data file of information relating to the preventive maintenance (p.m.) function is stored on magnetic tape. Each file record contains the following fields: task number, skill code, frequency of p.m. in meter hours, frequency of p.m. in calendar days, cost of each p.m. carried out, task description, equipment number, instruction number, number of times p.m. has been carried out, update code, present meter reading in hours, number of present calendar days, man hours for each p.m., life number of person carrying out p.m., department number associated with p.m., meter reading in hours of last p.m., and number of day of last p.m.

One program option is the data file update capability. Records may be deleted, changed, or added, and information describing additional performance of p.m. activities may be added to existing records.

A second program option is the retrieval and display of those tasks which are due for p.m. The program prints a separate page for each task which has been retrieved.

The program can also produce a future elapsed-time task list. The user provides as input the limits of the time period which he wants scanned. Processing then consists of retrieving those p.m. items in the data file which will be due during this period, including the number of times the items should be performed and the man-hours needed by each task.

A fourth option available is an Equipment Item Maintenance History. Input consists of the desired item numbers. The program scans each record, looking for those p.m. items whose equipment item numbers match those supplied. For each match, output consists of task number, task description, manhours, life number, meter hours at last p.m. performance, and number of day at last p.m. performance.

A Facilities Maintenance Costs printout represents a fifth processing capability. For each separate facility stored in the data file, a three-line summary is printed. This consists of the facility number, the total p.m. costs to date, and the total man-hours expended by the associated p.m. activities.

A sixth and seventh option concern the printout of information in the data file. If desired, just the fixed information may be listed. Alternately, the entire contents, including all lines of variable information, can be dumped.

(continued overleaf)

**Notes:**

1. This program was written in FORTRAN IV for use on the IBM-360 computer.
2. Requests for further information may be directed to:

COSMIC  
112 Barrow Hall  
University of Georgia  
Athens, Georgia 30601  
Reference: B71-10500

**Patent status:**

No patent action is contemplated by NASA.

Source: E.J. Cea and T.H. Grieger of  
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